Radiation Curing Technology

Description

An intensive three-day course that provides a firm foundation in the chemistry, principles and applications of ultraviolet and electron beam technologies. A session on practical application is included, in our laboratory.

Who Should Attend

Designed for both newcomers and more experienced personnel, from companies involved in formulation, supplying raw materials, equipment manufacture and end use.

Contents

Introduction
- What is radiation curing
- Chemistry, processes & products
- Market areas
- Benefits

Principles of UV curing
- Introduction
- Basic photochemistry
- Basic polymerisation

Photoinitiators
- Free radical type I
- Type II initiators
- Polymeric photoinitiators

Inhibition of free radical curing

Light absorption and light sourcing
- Matching emission spectra and absorption
- Effects of pigmentation
- Special initiators

Thiol-ene chemistry

Maleate-vinyl chemistry

The free radical curing process
- The curing process
- Polymer properties
- Monomers
- Prepolymers

Cationic curing process
- Photoinitiators Sulphonium and iodonium salts
- Epoxides and vinyl ethers
- Use of alcohols

Anionic curing

Cycloaddition reactions

Organosilicon chemistry

Evaluation of cure

Formulation
- Principles of formulation
- Practical aspects of formulation
- Raw material selection

Applications
- Litho
- Flexo
- Screen printing
- Inkjet
- Spray coatings
- Roller coating
- Powder coating
- Hand applied

Health & Safety

Regulatory Factors
- REACH, CLP and MSDS
- Affecting formulation

PRA
Pera Business Park, Nottingham Road, Melton Mowbray, Leicestershire, LE13 0PB, United Kingdom
Phone: +44 (0) 1664 501212 **Email:** coatings@pra-world.com **www.pra-world.com**

The information in this document was correct at time of publication. December 2016